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(71) Applicant (for all designated States except AT. US): NOVARTIS AG [CH/CH]; Lichistrasse 35. CH-4056 Basel (CH).

(71) Applicant (for AT only): NOVARTIS-ERFINDUNGEN VERWALTUNGSGESELLSCHAFT M.B.H [AT/AT]; Brunner Strasse 59. A-1230 Vienna (AT).

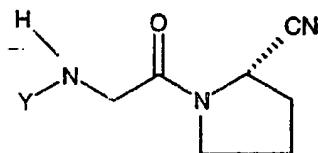
(72) Inventor; and

(75) Inventor/Applicant (for US only): VILLHAUER, Edwin, Bernard [US/US]; 20 Dorothy Drive. Morristown, NJ 07960 (US).



A3

(54) Title: 2-CYANOPYRROLIDINE DERIVATIVES AND THEIR USE AS MEDICAMENTS



(I)

(57) Abstract: The present invention relates to certain N-(substituted glycyl)-2-cyanopyrrolidines of formula (I) wherein Y is as defined herein, in free form or in acid addition salt form. Compounds of formula (I) inhibit DPP-IV (dipeptidyl-peptidase-IV) activity. They are therefore indicated for use as pharmaceuticals in inhibiting DPP-IV and in the treatment of conditions mediated by DPP-IV, such as non-insulin-dependent diabetes mellitus, arthritis, obesity, osteoporosis and further conditions of impaired glucose tolerance.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07D401/12 C07D207/16 C07D403/12 C07D417/12 C07D409/12
 A61K31/40 A61K31/4439 A61K31/506 A61K31/428 A61K31/427
 A61P3/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 98 19998 A (CIBA GEIGY AG; VILLHAUER EDWIN BERNARD (US)) 14 May 1998 (1998-05-14) claims; examples 1-66 ---	1-10
Y	US 6 011 155 A (VILLHAUER EDWIN BERNARD) 4 January 2000 (2000-01-04) claims; examples ---	1-10
Y	T. E. HUGHES ET AL.: "(1-'-'2--'(5-Cyanopyridin-2-yl!amino!-acetyl!-2-cyano-(S)-pyrrolidine), a Slow-Binding Inhibitor of Dipeptidyl Peptidase IV" BIOCHEMISTRY, vol. 38, no. 36, 1999, pages 11597-11603, XP002184055 page 11597, abstract; page 11598, Chart 1 ---	1-10 -/-



Further documents are listed in the continuation of box C



Patent family members are listed in annex.

* Special categories of cited documents

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- *E* earlier document but published on or after the international filing date
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X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel: (+31-70) 340-2040, Tx 31 651 epc nl.
 Fax: (+31-70) 340-3016

Authorized officer

Hass, C

INTERNATIONAL SEARCH REPORT

national Application No

PCT/EP 01/06595

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	BALKAN B ET AL: "INHIBITION OF DIPEPTIDYL PEPTIDASE IV WITH NVP-DPP728 INCREASES PLASMA GLP-1 (7-36 AMIDE) CONCENTRATIONS AND IMPROVES ORAL GLUCOSE TOLERANCE IN OBESE ZUCKER RATS" DIABETOLOGIA, BERLIN, DE, vol. 42, no. 11, November 1999 (1999-11), pages 1324-1331, XP000921066 ISSN: 0012-186X page 1324, abstract; page 1325, figure 1 -----	1-10
A	EP 0 419 683 A (JAPAN TOBACCO INC; YOSHITOMI PHARMACEUTICAL (JP)) 3 April 1991 (1991-04-03) page 30, line 1 - line 12; claims -----	1-10

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-3, 7-10 (all partly)

Compounds of formula (I) wherein Y is a substituted 1,1-dimethylethyl group, and their pharmaceutical use

2. Claims: 1-3, 7-10 (all partly), 4-6

Compounds of formula (I) wherein Y is a substituted cyclohexyl group, and their pharmaceutical use

3. Claims: 1-3, 7-10 (all partly)

Compounds of formula (I) wherein Y is a substituted piperidinyl group, and their pharmaceutical use

4. Claims: 1-3, 7-10 (all partly)

Compounds of formula (I) wherein Y is a carbobicyclic system, and their pharmaceutical use

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 01/06595

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